SX-64 Installation Instructions

Required tools:

- Phillips screwdriver
- IC extractor or small, flat bladed screwdriver. Needed for removal of the DOS ROMs from the SX-64. An extractor is recommended, but not necessary. If using a screwdriver, wrap tape around the tip to prevent damage to the circuit board when prying.
- Hand or power drill. Necessary for installation of the ROM selector switch in the SX-64 case assembly.

Procedure:

1. Make sure that the SX-64 power switch is OFF and that any peripherals (printer, disk drive, etc.) attached to the SX-64 are also switched OFF.

2. Unplug the SX-64 AC power supply cord from its wall outlet, outlet strip, etc.

3. Unplug all cables from the SX-64, including (if attached) the AC power supply cable, Keyboard cable, Joystick cable(s), Video cable, and Serial Bus cable.

4. If a disk is present in the disk drive, remove it.

5. Remove any devices plugged into the Cartridge and User Ports.

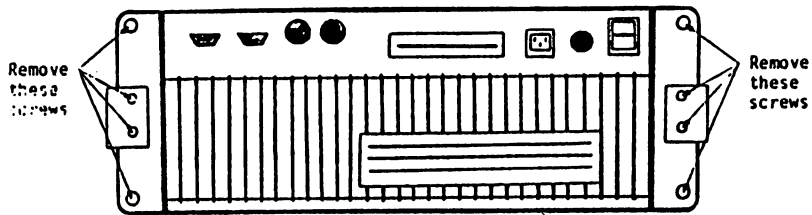6. Remove the eight screws shown in Figure 1 from the rear of the SX-64.

Figure 1: REAR PANEL SCREW REMOVAL

7. Remove both side rails from the SX-64 by sliding them towards the rear of the computer and then remove the three top cover retaining screws from each side of the SX-64 as shown in Figure 2.
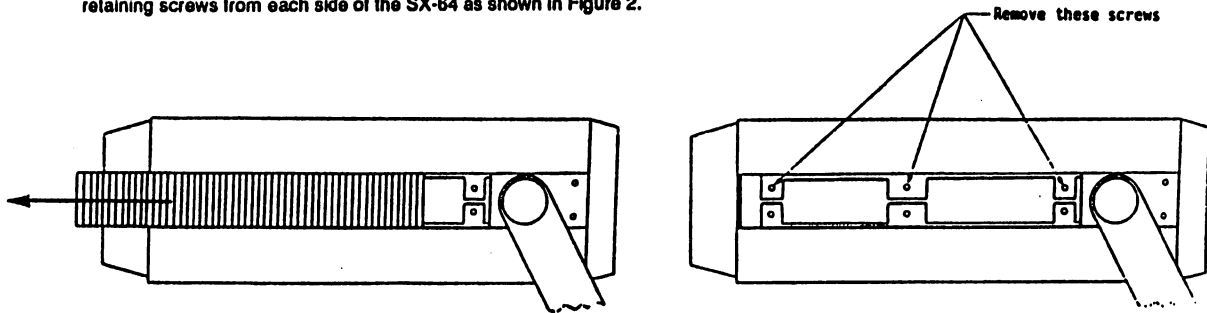

Figure 2: SIDE RAIL AND SCREW REMOVAL

8. Remove the SX-64 top cover.

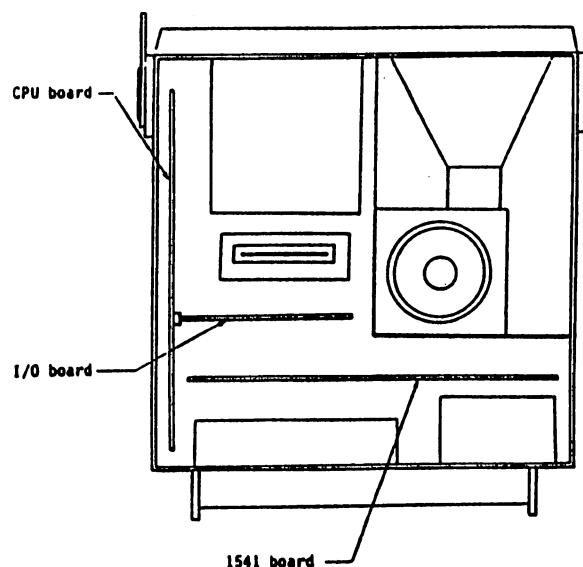9. Locate the SX-64 CPU circuit board using the board layout diagram shown in Figure 3.

Figure 3: SX-64 CIRCUIT BOARD LAYOUT

10. Remove the plastic tacks holding the CPU board and the I/O board to the SX-64 chassis. This should allow the CPU board enough freedom of movement to continue with the Kernal ROM installation.

11. Locate the stock SX-64 Kernal ROM on the CPU circuit board using the diagram shown in Figure 4.

12. Remove the Kernal ROM carefully from its socket using the IC extractor or small, flat-bladed screwdriver. Alternately pry the ROM from the front and back, raising it from its socket a little at a time. If using a screwdriver, take care not to damage the circuit board while prying.

13. Remove the JiffyDOS Kernal ROM labeled KERNAL-SX from its protective packing. Be careful of the wiring which connects the Kernal and 1541 ROMs to the selector switch. Put the stock Kernal ROM into the packing for safe keeping.

14. Inspect the JiffyDOS ROM assembly carefully. If you observe any bent pins, carefully straighten them with a pair of tweezers.

15. "Test fit" the JiffyDOS Kernal ROM on the top of the empty Kernal ROM socket but DO NOT PRESS IT INTO PLACE YET.

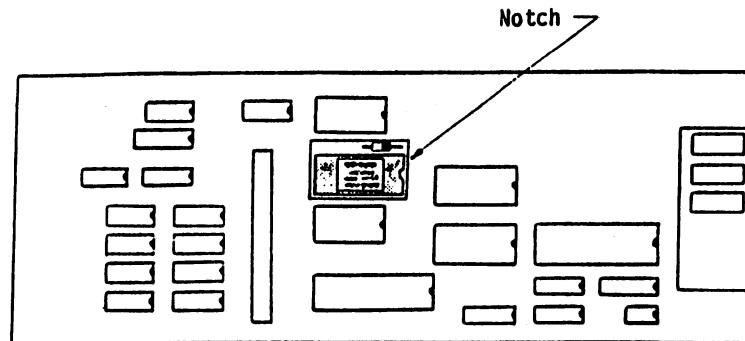   IMPORTANT: Make sure the notch in the JiffyDOS ROM is aligned as shown below.

Notch ➔

Figure 4: KERNAL ROM LOCATION

16. Make sure that all pins on the Kernal ROM are aligned with the socket. If any pins are misaligned, straighten them with a pair of tweezers.

17. With the pins properly aligned, press the JiffyDOS Kernal ROM into the socket using firm finger pressure on top of the ROM.

18. Make sure that the Kernal ROM assembly is seated evenly and completely in its socket. Make sure that no pins have been bent.

19. Carefully reseat the CPU board into its retaining slots in the SX-64 chassis. Replace the plastic tacks used to hold the CPU board and I/O board in place. Make sure that no cables have been pulled from from CPU board or other boards and that the I/O Board (see Figure 3) which plugs into the side of the CPU board is still fully seated in its connector.

20. Locate the 1541 circuit board using the diagram in Figure 3. Remove the plastic tacks holding the circuit board to the SX-64 chassis. This should allow the 1541 circuit board enough freedom of movement to continue with installation.

21. Locate the 1541 DOS ROM on the 1541 circuit board using Figure 5 below.

22. Remove the 1541 DOS ROM carefully from its socket using the IC extractor or small, flat-bladed screwdriver (it may be necessary to reposition the 1541 circuit board in order to gain easy access to the ROM). Alternately pry the ROM from the front and back, raising it from its socket a little at a time. If using a screwdriver, take care not to damage the circuit board while prying.

23. Remove the JiffyDOS ROM labeled 1541 from its protective packing. Put the stock 1541 DOS ROM back into the packing for safe keeping.

24. Inspect the JiffyDOS 1541 ROM carefully. If you observe any bent pins, carefully straighten them with a pair of tweezers.

25. "Test fit" the 1541 ROM on top of the empty 1541 DOS ROM socket but DO NOT PRESS IT INTO PLACE AT THIS TIME.

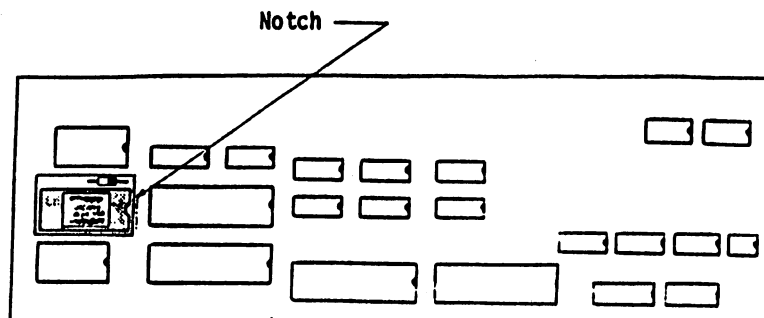   IMPORTANT: Be sure that the notch on the JiffyDOS 1541 ROM is aligned as shown below.

Notch ➔

Figure 5: 1541 ROM LOCATION

26. Make sure each pin of the JiffyDOS 1541 ROM is aligned properly with the socket. Straighten any misaligned pins with a pair of tweezers.

27. With the pins properly aligned and with the ROM notch oriented correctly, carefully press the JiffyDOS 1541 ROM into the socket using finger pressure until it is fully seated.

28. Make sure that the 1541 ROM assembly is seated evenly and completely and that no pins have been bent.

29. Carefully reseat the 1541 circuit board into the SX-64 chassis. Replace the plastic tacks used to hold the board in place. Make sure that any cables which may have been detached from the 1541 circuit board (or any other boards) are reconnected.

30. Drill a hole in the SX-64 case assembly to facilitate the mounting of the JiffyDOS Selector Switch. The diameter of the hole should be just slightly larger than the threaded collar on the switch. A location we would recommend is the upper portion of the rear panel (visible in Figure 1) near the game ports. Whether you choose this location or an alternate one, make sure that the switch will not interfere with any of the SX-64 internal electronics or with any cartridges, cables, interfaces, or other devices which will plug into the SX-64.

31. Install the JiffyDOS Selector Switch into the hole just drilled in the case assembly and then secure it using the nut and washers provided with the switch.

32. Replace the SX-64 top cover but do not reinstall the retaining screws at this time. Plug the AC power cord back into its connector at the rear of the SX-64 and then into a working outlet.

Installation Checkout Procedure:

1. Switch the SX-64 ON. The red indicator light on the front of the disk drive should come on immediately as power is switched on, stay on for about one second and then shut off as it normally does upon power-up.

   IF THE RED DRIVE LIGHT DOES NOT COME ON, STAYS ON OR BLINKS, IMMEDIATELY SWITCH THE SX-64 OFF. FOLLOW THE TROUBLESHOOTING STEPS OUTLINED BELOW:

   A. Unplug the AC power cord from the rear or the SX-64 and remove the top cover. Recheck all cable connections to the various circuit boards inside the SX-64. Make sure that none of the wiring that links the JiffyDOS Selector Switch to the Kernal and 1541 Adapter Boards has been broken. **MAKE SURE THAT THE AC POWER CORD HAS BEEN PLUGGED INTO A WORKING OUTLET.** Correct any problems, replace the AC power cord, and try powering up the computer again.

   B. If the problem still exists, unplug the AC power cord and remove the JiffyDOS Kernal ROM assembly from its socket on the CPU circuit board. Check for bent pins (Straighten any pins, if necessary) and then reinstall it. **MAKE SURE THAT THE NOTCH IN THE KERNAL ROM IS ORIENTED CORRECTLY.** Next, remove the JiffyDOS 1541 ROM assembly from its socket on the 1541 circuit board. Check for bent pins, and then reinstall it . Once the Kernal and 1541 ROM assemblies have been reinstalled, replace the AC power cord, and try powering up the SX-64 again.

   C. If steps A and B both fail, remove the AC power cord and top cover, remove both the JiffyDOS Kernal and the 1541 ROM assemblies, and reinstall the stock Kernal and 1541 DOS ROM's. Follow the same procedures for installing the stock ROM's as used earlier. Make sure that the notches on both the stock ROM's are oriented correctly. Replace the top cover and AC power cord, and try powering up the SX-64 again. If the SX-64 does not power up or operate properly with the stock ROM's installed, seek the assistance of a qualified technician. If necessary, contact the distributor from whom you purchased the JiffyDOS ROM or Creative Micro Designs, if the ROM was purchased directly from CMD and arrange for a warranty replacement.

2. After the SX-64 has been powered on for a few seconds, the usual Commodore SX-64 BASIC or JiffyDOS sign-on message should appear on the CRT screen.

   IF THE DISPLAY DOES NOT APPEAR WITHIN THE APPROPRIATE AMOUNT OF TIME, SWITCH THE SX-64 OFF, AND PROCEED WITH THE TROUBLESHOOTING PROCEDURES FOUND ABOVE.

3. Once the SX-64 has been powered up successfully, test the operation of the JiffyDOS Selector Switch. To do this, first note which sign-on screen is currently displayed on the CRT.

   NOTE: When JiffyDOS is selected, the sign-on screen will display the words JIFFYDOS VX.XX at the top the screen. Otherwise, the standard SX-BASIC screen will be displayed.

   Next, switch the SX-64 OFF and then toggle the JiffyDOS Selector Switch to its alternate position. Turn the SX-64 back ON. The alternate sign-on screen should then be displayed (for future use, take note of the switch position corresponding to the JiffyDOS and Commodore sign-on screens).

   If you cannot get both sign-on screens to be displayed, turn off the SX-64, toggle the selector switch back and forth several times (to break through any oxidation on the switch contacts), turn the SX-64 back ON, and then repeat this step from the beginning. If you still can get only one message to be displayed regardless of the switch position, switch the SX-64 OFF, and remove the AC power cable and top cover. Check the Selector Switch wiring for shorted or broken connections at the Kernal ROM Adapter Board and at the switch. Repair any evident problems (resolder the connections, if necessary), reassemble the SX-64, and check out the switch again. If necessary contact the distributor from whom you purchased the JiffyDOS ROM or Creative Micro Designs, if the ROM was purchased directly from CMD and arrange for a warranty replacement.

4. Next, shut off the SX-64, attach the keyboard and set the JiffyDOS Selector Switch for JiffyDOS mode. Power the SX-64 back ON. Make sure that the SX-64 is in JiffyDOS mode (the sign on screen will display JIFFYDOS VX.XX when the SX-64 is in JiffyDOS mode). Type the character @ on the keyboard followed by RETURN (this will read and display the disk drive error channel). The following message should be displayed on the CRT screen:

   73,JIFFYDOS x.x 1541,00,00

5. Insert a known good formatted diskette (preferably with a few programs on it) into the disk drive and press the f1 key. The red disk drive light should activate and a listing of the directory should appear on the screen.

   If the directory listing does not appear, switch the SX-64 OFF. Remove the AC power cables and the top cover. **MAKE SURE THAT ALL INTERNAL CABLES ARE PLUGGED SECURELY AND CORRECTLY INTO THE PROPER CONNECTORS.** Correct any loose or incorrect connections. Reassemble the SX-64 and try listing the directory again. If the problem persists, seek the assistance of a qualified technician. If necessary, contact the distributor from whom you purchased the JiffyDOS ROM or Creative Micro Designs, if the ROM was purchased directly from CMD and arrange for a warranty replacement.

6. Once the directory listing appears correctly on the screen, shut the SX-64 OFF and remove the AC power cord from the rear of the unit. Replace the retaining screws used to hold the top cover in place. Slide the rails into place along the side of the SX-64.

7. Replace the back panel and side rail retaining screws removed during disassembly (see Figure 1).

8. Plug the AC power cord back into the rear of the SX-64 and make sure that the keyboard is properly connected.

9. Refer to the JiffyDOS Users Manual for complete instructions on how to use JiffyDOS.